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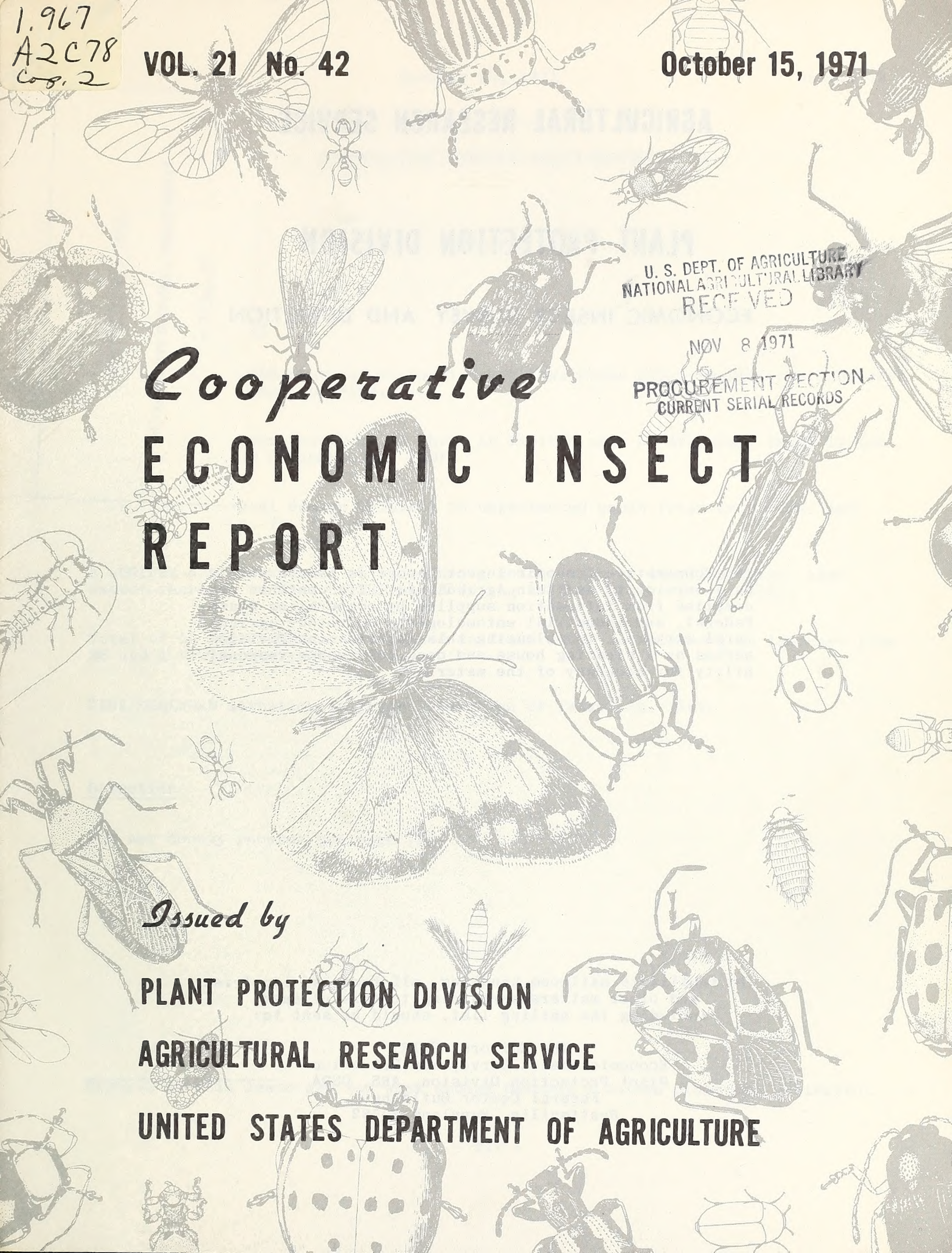
VOL. 21 No. 42

October 15, 1971



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Cooperative ECONOMIC INSECT REPORT

Issued by

PLANT PROTECTION DIVISION
AGRICULTURAL RESEARCH SERVICE
UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PROTECTION DIVISION

ECONOMIC INSECT SURVEY AND DETECTION

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Volume 21 October 15, 1971 Number 42

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

EUROPEAN CORN BORER heaviest in portions of Iowa since 1957. Populations increased in central Nebraska. (p. 719).

FALL ARMYWORM larvae outbreak on wheat in limited area of Arkansas. Small larvae heavy on wheat in Oklahoma. (p. 719).

FALL WEBWORM larval damage critical to unprotected pecan trees in central and southern Alabama. (p. 721).

A CONIFER SAWFLY expected to cause heavy defoliation to shortleaf pine, also expect increase in TENT CATERPILLARS during 1972 in Missouri. (p. 722).

Total of 50 SCREWWORM cases reported in Texas and 2 in Arkansas, an increase from 26 and 1 respectively. (p. 723).

PINK BOLLWORM situation in Trans-Pecos area of Texas. (p. 724).

Detection

For new county records see page 725.

Reports in this issue are for week ending October 8 unless otherwise indicated.

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WEATHER OF THE WEEK ENDING OCTOBER 7

Reprinted from Weekly and Crop Bulletin supplied by Environmental Data Service, NOAA.

HIGHLIGHTS: Fine autumn weather prevailed over most of the Nation. Generous rains fell along the Atlantic seaboard late in the week. Only widely scattered, light showers fell over the west.

PRECIPITATION: Light rain fell early in the week over the Washington coast. Heavier showers fell from the lower Rio Grande Valley northeastward to the middle Atlantic coast late Monday and Tuesday, and from Pennsylvania to New England later in the week. In 24 hours ending Tuesday morning, Cotulla, Texas, received 6.71 inches of rain. Rain fell over the eastern half of the Nation late in the week. This included light sprinkles from the Red River of the North Valley to New England Thursday, light to moderate showers from the lower Rio Grande to Western New York on Friday, and moderate rains in the Ohio River Valley and soil soaking rains along the Atlantic seaboard Saturday and Sunday. Florida received light showers on several days late in the week.

TEMPERATURE: High pressure systems dominated the weather over most of the nation last week. They brought typical autumn weather with the mild sunny afternoons and the cool invigorating nights. It was especially cool from the northern Great Plains to New England where afternoon temperatures by midweek were in the 40's, 50's and low 60's. The early morning temperatures dropped to the 30's over the higher Rocky Mountains and on Friday morning, minimums in the 30's and 40's were common over the north from Washington and Oregon to the Atlantic Ocean and as far south as Virginia. Beckley, West Virginia, registered 32° Friday morning. The exceptions to the fine cool autumn weather included southern California where desert winds pushed the temperatures to the 30's most afternoons and sunny Florida where the mercury reached the 90's on Wednesday afternoon. Los Angeles, California, registered 102° Wednesday. Santa Ana winds caused unseasonal warmth over the inland portions of California over the weekend. A large high, centered over the Great Basin, brought warm air northward to Montana and cool air to a large area from the Dakotas to the Great Lakes and southward to Oklahoma and Tennessee. On Saturday afternoon, the maximum temperatures over this large area were mostly in the 60's. Temperatures averaged below normal over most of the Nation. Warmer than normal temperatures prevailed over much of the West.

SPECIAL INSECTS OF REGIONAL SIGNIFICANCE

BEET LEAFHOPPER (*Circulifer tenellus*) - CALIFORNIA - Survey late September shows 76 percent nymphs in Fresno County. In Kings County, nymphs very young. Treatment started in Kern County on October 6. In San Joaquin Valley about 200,000 acres of Russian thistle to be treated. (Cal. Coop. Rpt.).

CORN EARWORM (*Heliothis zea*) - MICHIGAN - About 2.5 percent of late-harvested sweet cherry peppers in Monroe County infested. Indicates new insect problem on this crop, following end of control for second-generation *Ostrinia nubilalis* (European corn borer). (Sauer). DELAWARE - Adult flights less than 1 per night in blacklight traps in Sussex County. (Burbutis, Lesiewicz). OKLAHOMA - Larvae averaged 12 per 25 sweeps in alfalfa in Jackson, Tillman, Kiowa, Cotton, Stephens, and Jefferson Counties. Adults common in most areas. (Okla. Coop. Sur.).

GREENBUG (*Schizaphis graminum*) - NEW MEXICO - Populations light, but infestations scattered in sorghum in Roswell area, Chaves County. (Mathews).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - NEVADA - Light on alfalfa breeder plots at Reno, Washoe County. (Arnett).

CORN, SORGHUM, SUGARCANE

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - IOWA - Infested 99 percent of plants in 32 fields in Boone County. Borers 340 per 100 plants; 54 percent of shanks tunnelled, 395.8 ears per acre felled as result. Population (56,938 borers per acre) greatest since 1957. (Iowa Ins. Sur.). NEBRASKA - Populations declined in northeast, increased in central district, as compared to fall of 1970. Plants in northeast averaged 94.6 percent infested, 214.7 borers per 100 plants. Central district had 84.6 percent infested plants, 526.9 borers per 100 plants. (Keith, Berogan). NORTH CAROLINA - Surveys show even distribution statewide. Heaviest infestations in Coastal Plain area. Stalk breakage related to borers did not exceed 2 percent in any area. (Hunt).

SORGHUM MIDGE (*Contarinia sorghicola*) - MISSISSIPPI - Continues heavy in late sorghum in Noxubee County. (Robinson). NORTH CAROLINA - Adults collected from milo near Plymouth, Washington County for first of season. About 80+ percent of heads destroyed in 6-acre field. (Van Duyn et al.).

SOUTHWESTERN CORN BORER (*Diatraea grandiosella*) - MISSOURI - Percent infestation by county as follows: Butler 23.2, Cape Girardeau 10.4, Dunklin 35.2, Mississippi 68, New Madrid 37.6, Pemiscot 29.6, Scott 40.8, Stoddard 24.8. (Munson). ARIZONA - In 1970, at this time many fields of sorghum in Pima County 50 percent infested. Presently about 4 percent. (Ariz. Coop. Sur.).

SMALL GRAINS

FALL ARMYWORM (*Spodoptera frugiperda*) - ARKANSAS - Outbreak, larvae up to 12 per square foot of wheat in Ashley County; about 100 acres destroyed. Controls applied to several fields. (Boyer). OKLAHOMA - Small larvae heavy on wheat in Jackson, Tillman, Cotton, Kiowa, Jefferson, and Stephens Counties. Ranged up to 6 per 4 leaf plant in some fields. Ovipositing adults numerous. Some fields sprayed 3 times. Heavy in Harper, Woodward, Osage, and Craig Counties; moderate in Garvin County. Moderate on rye in Choctaw County. (Okla. Coop. Sur.). TEXAS - Damage decreased on small grains and grasses in Rolling Plains area. Some damage continues. Noted throughout much of south-central area. Infested coastal Bermuda grass, forage sorghums, lawns, and golf greens in counties near Gonzales. (Boring, Cole).

TURF, PASTURES, RANGELAND

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Infested Bermuda grass lawns in Oktibbeha County. (Robinson). ARKANSAS - Feeding on fescue pastures in Ashley County. Controls may be needed. (Boyer). OKLAHOMA - Light to moderate in south-central area. (Okla. Coop. Sur.).

TWOLINED SPITTLEBUG (Prosapia bicincta) - ALABAMA - Light but noticeable damage to several coastal Bermuda grass fields in Geneva and Barbour Counties. (Reynolds, Walton).

FORAGE LEGUMES

ALFALFA CATERPILLAR (Colias eurytheme) - ARIZONA - Counts per 100 sweeps of alfalfa: Southern Maricopa County, larvae 54; Yuma County, Yuma Mesa and Valley 20, Gila Valley 80. (Ariz. Coop. Sur.). NEW MEXICO - Larvae ranged 1-2 per sweep in most alfalfa in Lea County and ranged 5-8 per 25 sweeps in fields near Roswell, Chaves County. Adults very abundant in Lea County. (Mathews).

FALL ARMYWORM (Spodoptera frugiperda) - OKLAHOMA - Heavy in fall planted alfalfa in Osage County. (Okla. Coop. Sur.).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Heavy; damage light in alfalfa in several southwestern and south-central counties. (Okla. Coop. Sur.).

THREECORNERED ALFALFA HOPPER (Spissistilus festinus) - ARIZONA - Counts per 100 sweeps of alfalfa: Southern Maricopa County 486; Yuma County, Parker Valley 125, Gila Valley and Yuma Mesa 110, Yuma Valley 650. (Ariz. Coop. Sur.).

ALFALFA WEEVIL (Hypera postica) - OKLAHOMA - Adults averaged 12 per 25 sweeps of alfalfa and common on ground. (Okla. Coop. Sur.).

SOYBEANS

MEXICAN BEAN BEETLE (Epilachna varivestis) - VIRGINIA - Defoliated soybean leaves in Nansemond County area; beans too mature to suffer much damage. (Smith).

VELVETBEAN CATERPILLAR (Anticarsia gemmatalis) - FLORIDA - Larvae attacked and killed by Spicaria rileyi (a fungus) in soybean fields near Gainesville, Alachua County. (Whitcomb).

BANDEDWING WHITEFLY (Trialeurodes abutilonea) - MISSISSIPPI - Surveys in Leflore, Sunflower, Bolivar, and Coahoma Counties. Indicated infestations most common around edges of fields. Heavy in single field in Leflore County; sooty mold noted throughout field. (Robinson).

COTTON

BOLL WEEVIL (Anthonomus grandis) - TEXAS - Populations light (punctured square counts less than 1 percent) in St. Lawrence area of Glasscock County where diapause control programs have been carried out in previous years. In northeastern part of Glasscock County where diapause control programs had not been conducted in past, populations ranged 10-30,000 adults per acre. In many of these fields 100 punctured squares common. In Midland and Martin Counties, punctured squares ranged less than 1 percent. (Neeb). OKLAHOMA - Adults numerous in cotton with flowers and green squares in southwestern area fields not sprayed; squares not likely to make before frost. (Okla. Coop. Sur.). ALABAMA - Weevils in fields still heavy although present newly emerged adults not expected to cause further damage this season. Counties reporting problems with boll rot are Marion, Cullman, Cherokee, Cleburne, Etowah, Hale, Dallas, and Barbour. (McQueen).

BOLLWORMS (*Heliothis* spp.) - TEXAS - Heavy *H. zea* infestations appeared in fields scattered throughout Rolling Plains area surrounding Wilbarger County. Heaviest in fields where insecticides had been applied. (Boring). MISSISSIPPI - Few larvae feeding on mature green bolls in several fields in Leflore, Sunflower, Bolivar, and Coahoma Counties. Average infestation about 3 percent. Some producers applied an additional application of insecticide to control these larvae. Population consisted of about 20 percent *H. virescens*. (Robinson).

POTATOES, TOMATOES, PEPPERS

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - DELAWARE - Most larvae in diapause in sweet peppers in Sussex County. (Burbutis, Lesiewicz).

BEANS AND PEAS

NOCTUID MOTHS - FLORIDA - Larvae of *Anticarsia gemmatalis* (velvetbean caterpillar) account for 50 percent of population and *Heliothis zea* (corn earworm) 25 percent, and *H. virescens* (tobacco budworm) 25 percent, on pigeon pea at Gainesville, Alachua County. (Mead).

DECIDUOUS FRUITS AND NUTS

FALL WEBWORM (*Hyphantria cunea*) - ALABAMA - Larval damage on unprotected pecan trees critical in many central and southern areas. Defoliation more complete than previously noted. Early loss of leaves reduces quality and yield of nuts and potential yields for 1972. (McQueen).

GREEN PEACH APHID (*Myzus persicae*) - WASHINGTON - Alates migrating to overwintering host, peach, in Yakima Valley, Yakima County. (Johnson, Landis).

PEACHTREE BORER (*Sanninoidea exitiosa*) - OKLAHOMA - Heavy in young peach trees in Latimer County. (Okla. Coop. Sur.).

WHITE PEACH SCALE (*Pseudaulacaspis pentagona*) - FLORIDA - Many crawlers on peach trees at Hawthorne, Alachua County. (Whitcomb).

CITRUS

Insect Situation in Florida - End of September - CITRUS RUST MITE (*Phyllocoptruta oleivora*) infested 80 (norm 57) percent of groves; economic in 63 (norm 35) percent. Increasing after brief decline in August and early September. Population highest for this period in 20 years of record. Further increase expected to keep population in high range into November. Highest districts west, south, central, and north. East district low. CITRUS RED MITE (*Panonychus citri*) infested 18 (norm 23) percent of groves; economic in 4 (norm 5) percent. Population near normal low level. Expect gradual increase and few groves may develop important infestations. Highest district west. TEXAS CITRUS MITE (*Eutetranychus banksi*) infested 17 (norm 16) percent of groves; economic in 2 (norm 3) percent. This mite at low level of abundance normal for September. Fall increase started and will continue into December. Highest district south. GLOVER SCALE (*Lepidosaphes gloverii*) infested 48 (norm 50) percent of groves; economic in 5 (norm 8) percent. Slightly below normal and in low range. Gradual increase expected. Highest district west. PURPLE SCALE (*L. beckii*) infested 45 (norm 46) percent of groves; economic in 1 (norm 2) percent. CHAFF SCALE (*Parlatoria pergandii*) infested 28 (norm 30) percent of groves; economic in 2 (norm 2) percent. YELLOW SCALE (*Aonidiella citrina*) infested 19 (norm 46) percent of groves; none economic (norm 6 percent). These 3 scales all near or below their normal low levels for this time of year in all districts. Little change expected. BLACK SCALE (*Saissetia oleae*) infested 59 (norm 37) percent of groves; economic in 34 (norm 15) percent. Although population at record high level for this month of year, it will soon drop out of high range and gradually decrease to normal. Highest districts central, south, and east. AN ARMORED SCALE (*Unaspis citri*) infested 27 percent of groves; economic in 21 percent. Population higher than in September of any prior year.

Increase predicted for October. WHITEFLIES infested 88 percent of groves; economic in 20 percent. Population of larval stage above normal and in high range. Decrease expected. Highest districts west, central, and east. (W.A. Simanton, Citrus Expt. Sta., Lake Alfred)).

CITRUS THRIPS (Scirtothrips citri) - ARIZONA - Young trees treated in citrus nursery at Yuma. Home owners noticed fruit scarring and leaf damage, especially to new growth in Yuma County. (Ariz. Coop. Sur.).

GRASSHOPPERS (Melanoplus spp.) - ARIZONA - Unusually heavy in citrus nursery feeding on seedlings on Yuma Mesa, Yuma County. Controls needed. (Ariz. Coop. Sur.).

SMALL FRUITS

BROWN SOFT SCALE (Coccus hesperidum) - CALIFORNIA - Adult infested wild grapevines at Napa, Napa County. Extensive grape vineyards in area. (Cal. Coop. Rpt.).

GRAPE PHYLLOXERA (Phylloxera vitifoliae) - PENNSYLVANIA - Aerial leaf galls caused by nymphs and adults seen on Sevyl Blanc grape, 20-25 galls per leaf in Lancaster County September 27; root galls on Concord grapes in northeast, Erie County September 29. (Adams).

FOREST AND SHADE TREES

A CONIFER SAWFLY (Neodiprion taedae linearis) - MISSOURI - Defoliation heaviest in 15 years on 3-23 foot tall planted shortleaf pine along fringe of natural range. Heavy defoliation expected in 1972. (Gass).

EUROPEAN PINE SAWFLY (Neodiprion sertifer) - MISSOURI - Expect populations to remain below normal or normal in 1972. (Gass).

WHITE PINE SAWFLY (Neodiprion pinetum) - WEST VIRGINIA - Light larval damage to plantings on reproduction white pine in Raleigh County. (W. Va. Ins. Sur.).

BAGWORM (Thyridopteryx ephemeraeformis) - MISSOURI - Damage to evergreens expected to increase in 1972. (Gass).

PALES WEEVIL (Hylobius pales) - MISSOURI - Not serious in Christmas tree plantations in 1971. Expect incidence to increase in 1972. (Gass).

NATIVE ELM BARK BEETLE (Hylurgopinus rufipes) - NORTH DAKOTA - Elm trap logs placed along Red River during May at 4 sites in Cass and Richland Counties this period had up to 24 galleries per foot of log. (Brandvik).

ASIATIC OAK WEEVIL (Cyrtepistomus castaneus) - MISSOURI - In 1971, more widespread and caused more defoliation in previously uninfested areas. Expect little change in 1972. (Gass).

FALL WEBWORM (Hyphantria cunea) - MISSOURI - Populations heavy in southwest areas in 1971. Expect heavy defoliation in same areas in 1972. (Gass).

VARIABLE OAKLEAF CATERPILLAR (Heterocampa manteo) - OKLAHOMA - Heavy oak tree defoliation in Preston area, Okmulgee County and Bryan County. (Okla. Coop. Sur.). ARKANSAS - Still abundant on oak trees in Jefferson and Lincoln Counties. (Boyer).

FOREST TENT CATERPILLAR (Malacosoma disstria) - MISSOURI - First reports in 75 years in southern areas. Expected to be more numerous in 1972. (Gass).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - MISSOURI - Egg mass counts indicate heavy populations can be expected in 1972. (Gass).

BIRCH SKELETONIZER (*Bucculatrix canadensisella*) - PENNSYLVANIA - Heavy larval and cocoon counts. Defoliation over 70 percent, mainly yellow birch in Warren and Crawford Counties, September 23-30. (Adams).

MAN AND ANIMALS

SCREWWORM (*Cochliomyia hominivorax*) - Total of 53 cases reported in U.S. October 3-9, as follows: TEXAS - Brewster 2, Edwards 9, Kerr 1, Kinney 3, Maverick 1, Val Verde 16, Pecos 1, Real 1, Terrell 1, Uvalde 3, Bowie 1, Concho 1, Coryell 1, Hamilton 2, Kimble 1, Lampasas 3, Mills 2, San Saba 1; ARKANSAS - Little River 2; UNKNOWN ORIGIN - 1. Total of 441 laboratory-confirmed cases reported in portion of Barrier Zone in Republic of Mexico as follows: Territorio sur de Baja California 2, Sonora 7, Chihuahua 251, Coahuila 98, Nuevo Leon 21, Tamaulipas 62. Total of 121 cases reported in Mexico south of Barrier Zone. Barrier Zone is area where eradication operation underway to prevent establishment of self-sustaining population in U.S. Sterile screwworm flies released: Texas 63,682,000; Arkansas 2,670,000; Arizona 3,646,000; Mexico 80,106,000. (Anim. Health Div.).

STABLE FLY (*Stomoxys calcitrans*) - FLORIDA - Averaged 2.6 per head on untreated beef cattle at Quincy. (Head). TEXAS - Still a problem in Archer County. (Boring). NORTH DAKOTA - Infestations continue annoying hogs in east-central counties. Ranged up to 10 per square foot on pens, floors, and walls in hog barn in Traill County. (Brandvik).

HORN FLY (*Haematobia irritans*) - MARYLAND - Adults ranged 60-200 per head on 30 beef cattle in Wicomico County. (U. Md., Ent. Dept.). FLORIDA - Averaged 1.4 flies per head on untreated beef cattle at Quincy, Gadsden County. (Head). TEXAS - Activity decreased on cattle in Archer County. (Boring).

HORSE BOT FLY (*Gasterophilus intestinalis*) - MARYLAND - Adults averaged less than 1 (laying eggs) per 3 horses in several areas in Prince Georges and Worcester Counties. (U. Md., Ent. Dept.).

FACE FLY (*Musca autumnalis*) - UTAH - Collected at Morgan, Morgan County, August 5, for a new county record. (Hanson, Knowlton).

A CATTLE TICK (*Boophilus* sp.) - TEXAS - During September, one collection from Hidalgo County. (Anim. Health Div.).

STORED PRODUCTS

BROWN SPIDER BEETLE (*Ptinus clavipes*) - IOWA - Found in feed room in Clay County; determined by H. Gunderson. This is a new county record. (Iowa Ins. Sur.).

CADELLE (*Tenebroides mauritanicus*) - COLORADO - Heavy in 1971 stored wheat in grain bin near Haxtun, Phillips County. (Bird).

BENEFICIAL INSECTS

GREEN LACEWINGS (*Chrysopa* spp.) - ARIZONA - Averaged 18 per 100 sweeps of milo in Maricopa County. (Ariz. Coop. Sur.).

HONEY BEE (*Apis mellifera*) - WEST VIRGINIA - Total of 1,116 colonies inspected during September. Of these, 59 dead colonies and 12 diseased with American foulbrood. Two of diseased colonies destroyed. (W. Va. Ins. Sur.).

A EULOPHID WASP (*Encarsia formosa*) - WASHINGTON - Natural population beginning to control severe infestation of *Trialeurodes vaporariorum* (greenhouse whitefly) on tomatoes in greenhouse at Pullman, Whitman County. (Johansen).

MELYRID BEETLES (*Collops* spp.) - ARIZONA - Averaged 30 per 100 sweeps of alfalfa in Maricopa County. (Ariz. Coop. Sur.).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

Pink Bollworm Situation in the Trans-Pecos Area of Texas

Pink Bollworm (*Pectinophora gossypiella*) populations have continued to build up in the central and Trans-Pecos areas. Infestations generally widespread in Martin, Midland, and Glasscock Counties and Bakersfield area of Pecos County in Trans-Pecos area. Infestations in the Coyanosa area, and westward into Reeves and other cotton-growing counties of Trans-Pecos were noted as being isolated and scattered. During September, increase was noted, but these populations began to build up later this year than in previous years. Most of the cotton in the Trans-Pecos area is 60-70 percent open now, so late bolls in the field are subject to attack. In Midland and Glasscock Counties, and in the Bakersfield area of Pecos County, cotton is still blooming and it is not uncommon to find 10-15 percent rosetted blooms in this area.

Widespread infestations have been noted in central areas. Hill, McLennan, Bell, and Milam Counties have had heavy populations during September. Cotton in these areas is about 75 percent harvested and pink bollworms are being found in the top bolls. Heavy populations were noted in Hardeman County near Chillicothe.

Pink bollworm populations are general throughout the north-central area. (Green et al.).

PINK BOLLWORM (*Pectinophora gossypiella*) - NEW MEXICO - Increasing in cotton in southern Eddy County, southern Dona Ana County, and in Hobbs and Lovington area, Lea County. (N.M. Coop. Rpt.). ARIZONA - Pima County growers who discontinued spray schedules, but planning on increased yields from top crop cotton, appear to have lost. Others who maintained spray programs have less than 4 percent infestations. In Bowie and San Simon areas top crop estimated to be 15 percent infested in Cochise County. (Ariz. Coop. Sur.).

CITRUS BLACKFLY (*Aleurocanthus woglumi*) - MEXICO - New infestation at Matamoros. Specimens found on 3 citrus leaves about half block from Rio Grande. TEXAS - Surveys negative in area treated 3 times at Brownsville, Cameron County. Some eggs found in areas treated twice; apparently these egg nonviable. (PPD).

A FRUIT FLY (*Anastrepha nigrifascia*) - FLORIDA - Collected 52 adults (20 males, 32 females) in single McPhail trap at Key West, Monroe County. (Pierce).

GYPSY MOTH (*Porthetria dispar*) - PENNSYLVANIA - Adults collected in Porter Township, Lycoming County; third collection for this county. (Gerardi).

ORIENTAL FRUIT FLY (*Dacus dorsalis*) - CALIFORNIA - Single male fly taken in Steiner trap in loquat tree at Pacific Beach, San Diego County. Collected by D.A. Reyes and E. Paddock. Determined by M. Gardner. First collection in San Diego County. Delimiting surveys underway. Detection for larval infestation negative. Area of this find is residential and beach homes; remote from any commercial plantings. (Cal. Coop. Rpt.).

WESTERN GRAPELEAF SKELETONIZER (*Harrisina brillians*) - CALIFORNIA - Detection revealed 40 eggs on grape foliage, 1 male and 3 female moths and 3 late instar larvae, at Clovis, Fresno County. (Cal. Coop. Rpt.).

WEST INDIAN SUGARCANE ROOT BORER (*Diaprepes abbreviatus*) - FLORIDA - Recovered 5 adults on October 1, and 6 on October 4, from leaves of sweet orange trees in Plymouth area of Orange County. (Chambliss, Venable).

HAWAII INSECT REPORT

Corn - Infestations moderate of mixed populations of POTATO APHID (*Macrosiphum euphorbiae*) and TUMID SPIDER MITE (*Tetranychus tumidus*) in about 10 acres of mature seed corn at Kaunakakai, Molokai; trace in 6 acres of seedlings in 2 separate plantings of this crop at same area. (Kawamura).

Fruits and Nuts - BARNACLE SCALE (*Ceroplastes cirripediformis*) heavy in 1.5 acres of mature passion fruit at Kahului, Maui; as many as 75 scales (mostly young) per inch of pencil size stems. Trace in surrounding 12.5 acres; negligible in about 60 acres of young seedlings at same area. Parasites trace. (Miyahira). COCONUT LEAFROLLER (*Hedylepta blackburni*) damage moderate to heavy to fronds of old coconut trees from Kamalo through Pukoa, Molokai; as much as 80 percent of fronds on most trees affected; averaged 70 percent. Negligible on same host at Kaunakakai. Damage moderate to heavy of older fronds of 5 coconut trees at Kakaako, Honolulu, Oahu; about 80 percent of fronds affected. Moderate number of unspecified hymenopterous cocoons noted on pinnae. (Kahale et al.). REDBANDED THRIPS (*Selenothrips rubrocinctus*) moderate to heavy on 95 percent of young leaves of about 100 mango (*Mangifera indica*) trees at Kahaina, Maui; as many as 100+ nymphs and adults on some heavily infested leaves. (Miyahira).

Forest and Shade Trees - Larvae of a NOCTUID MOTH (*Melipotis indomita*) moderate under flaky bark of kiawe trees in leeward areas of Molokai; *Polistes* sp. (a vespid wasp) numerous in area. On Maui, moderate larval populations causing 50 percent defoliation of about 20 monkeypod trees at Sprecklesville. Larval population on Oahu light during September; light trap collections of adults indicated peak in August (323) and decline in September (160). (Kawamura).

Beneficial Insects - Larvae of a TORTRICID MOTH (*Apotoforma* sp.) infested about 80 percent of young terminal leaves of scattered blackberry growth in 100+ acres at Waikamoi, Maui. This species purposely introduced from Mexico in 1963 to aid in control of blackberry and released on Maui in August 1964. (Miyahira).

Miscellaneous Pests - Adults of a LYGAEID BUG (*Neacoryphus bicrucis*) light in fluted pinnae of young fronds of 8 roadside coconut seedlings at Kamiloloa, Molokai; as many as 16 adults noted on one frond. Nil on 55 similar host plants at same area. (Kawamura).

DETECTION

New County Records - BROWN SPIDER BEETLE (*Ptinus clavipes*) - IOWA - Clay (p. 723). FACE FLY (*Musca autumnalis*) - UTAH - Morgan (p. 723).

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap (BL = blacklight, I = incandescent, MV = mercury vapor, O = other)	Agrotis ipsilon (black cutworm)	Estigmene acrea (saltmarsh caterpillar)	Euxoa auxiliaris (army cutworm)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Laspeyresia pomonella (codling moth)	Loxostege commixtalis (alfalfa webworm)	Loxostege rantalis (garden webworm)	Loxostege sticticalis (beet webworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Spodoptera ornithogalli (yellowstriped armyworm)	Trichoplusia ni (cabbage looper)	Crops
FLORIDA																								
Gainesville 10/1-7			BL	2	1			2	1										4	3	1		1	
MISSISSIPPI																								
Stoneville 10/1-7	52-90	41	BL	24				64	22	316								1	20	135	27	108	1185	
NEW HAMPSHIRE																								
Lee 9/29	45-55		BL	1															14				1	
OHIO																								
Wooster 10/1-7			BL	5			4	2		16							9	13	23		87		4	
TENNESSEE (County)																								
Fayette 10/4-8			BL	3				4		23						1	10	5	15	21	4	3	1	
Hardeman 10/4-8			BL	18				31		140							17	6	38	9	1	24	4	
Lauderdale 10/4-8			BL	22				11	1	74							9	5	7	9	6	6	14	
TEXAS																								
Waco 10/1-8			BL	19				191		722								119	116	312	427	180	12	
VIRGINIA																								
Holland 9/28-10/1			BL	1						43							1		4			9		
Montgomery 9/29-10/6			BL	3						7					1		1		2			15		
Petersburg 9/25-10/1			BL							10						1								
WISCONSIN																								
Lancaster 9/24-10/4			BL	1						17								70	51		5			
Mazomanie 9/28-10/4			BL	2						6									4		10			

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